

STATE OF NEVADA
Department of Conservation and Natural Resources
Division of Environmental Protection
Bureau of Mining Regulation and Reclamation

Water Pollution Control Permit

Permittee: **Schlumberger Technology Corporation
Clayton Valley Pilot Plant Project
5599 San Felipe
Houston, TX 77056**

Permit Number: **NEV2020114**
Review Type/Year/Revision: **New Permit 2022, Revision 00**

Pursuant to Nevada Revised Statutes (NRS) 445A.300 through 445A.730, inclusive, and regulations promulgated thereunder by the State Environmental Commission and implemented by the Division of Environmental Protection (the Division), this Permit authorizes the Permittee to construct, operate, and close the **Clayton Valley Pilot Plant Project**, in accordance with the limitations, requirements, and other conditions set forth in this Permit. The Permittee is authorized to produce up to **65.3 tons of lithium carbonate and/or lithium hydroxide** per year.

The facility is located in Esmeralda County, within Section 29, Township 2 South, Range 40 East, Mount Diablo Baseline and Meridian, approximately 3 miles southeast of the town of Silver Peak, Nevada.

The Permittee must comply with all terms and conditions of this Permit and all applicable statutes and regulations.

This Permit is based on the assumption that the information submitted in the application of 20 August 2020, as modified by subsequent approved amendments, is accurate and that the facility has been constructed and is being operated as specified in the application. The Permittee must inform the Division of any deviation from, or changes in, the information in the application, which may affect the ability of the Permittee to comply with applicable regulations or Permit conditions.

This Permit is effective as of **2 March 2022**, and shall remain in effect until **1 March 2027**, unless modified, suspended, or revoked.

Signed this 14TH day of **February 2022**.


Aimee Keys
Chief, Bureau of Mining Regulation and Reclamation

FOR A. KEYS
2/14/2022

I. Specific Facility Conditions and Limitations

A. In accordance with operating plans and facility design plans reviewed and approved by the Division the Permittee shall:

1. Construct, operate, and close the facility in accordance with those plans;
2. Contain within the fluid management system all process fluids including all meteoric waters which enter the system as a result of the 100-year, 24-hour storm event; and
3. Not release or discharge any process or non-process contaminants from the fluid management system.

B. Schedule of Compliance:

1. Prior to initiating operations, the Permittee shall either (1) provide a plan for disposal of the effluent or (2) receive a discharge Permit from the Division for disposal of the effluent.
2. Prior to initiating operations, the Permittee shall submit a Profile I, sulfite, and TOC analysis of groundwater from extraction well, CV-9, and monitoring well, MW-1, to establish background groundwater quality at the facility.
3. Prior to initiating operations, the Permittee shall submit a Spill Prevention Control and Countermeasures Plan for Division approval.
4. Thirty days prior to initiation of operations, the Permittee shall submit to the Division a written notice of intention to begin operation pursuant to Nevada Administrative Code (NAC) 445A.426.
5. Within thirty (30) days of completion of construction, the Permittee shall submit to the Division an as-built report in accordance with Nevada Administrative Code (NAC) 445A.427.
6. Thirty days prior to initiation of operations, the Permittee shall schedule a reasonable time for the Division to conduct a facility inspection to ascertain compliance of the constructed facility with the approved design and Permit.

The schedule of compliance items above are not considered completed until approved in writing by the Division.

C. The fluid management system covered by this Permit consists of the following process components:

1. Lined processing area with equipment including, but not limited to, all tanks, basins, sumps, pumps, and piping necessary to interconnect the components within the area;
2. Transfer pipes, valves, and pumps used in conveyance, control, or detection of process fluids between process components; and
3. Earthen Stormwater Pond.

D. Monitoring Requirements:

<u>Identification</u>	<u>Parameter</u>	<u>Frequency</u>
1. <u>Water Supply</u> Silver Peak Municipal Supply	Profile I ^(1,4)	Initially then annually
2. <u>Brine Well</u> CV-9	Profile I ⁽¹⁾ , sulfite, and TOC; Volume pumped (gal)	Initially then quarterly; Monthly
3. <u>Site Monitoring Wells</u> MW-1	Profile I ⁽¹⁾ , sulfite, and TOC, water and collar elevation (feet AMSL)	Quarterly (once Commissioned)
4. <u>Stormwater Pond</u>	Profile I ⁽¹⁾ , sulfite, and TOC, freeboard (ft)	Quarterly (once commissioned)
5. <u>Processing Leak Detection</u> PZ-1 and PZ-2	Hydraulic head (feet)	Weekly

The Permittee may request a reduction of the monitoring frequency after four quarters of complete monitoring based on justification other than cost. Such reductions may be considered modifications to the Permit and require payment of modification fees.

Abbreviations and Definitions:

AMSL = above mean sea level; ASTM = American Society for Testing and Materials; CaCO₃ = calcium carbonate; EPA = U.S. Environmental Protection Agency; gal = gallons; gpd = gallons per day; gpm = gallons per minute; mg/L = milligrams per liter; N = nitrogen; NAC = Nevada Administrative Code; NDEP = Nevada Division of Environmental Protection; P = phosphorous; pCi/L = picocuries per liter; pH = the negative of the base 10 logarithm of the activity of the hydrogen ion; SU = standard units for pH measurement

Footnotes:

(1) Profile I:

Alkalinity (as CaCO ₃)	Cadmium	Magnesium	Silver
Bicarbonate	Calcium	Manganese	Sodium

Total	Chloride	Mercury	Sulfate
Aluminum	Chromium	Nitrate + Nitrite (as N)	Thallium
Antimony	Copper	Nitrogen, Total (as N)	Total Dissolved Solids
Arsenic	Fluoride	pH (± 0.1 SU) ⁽³⁾	Uranium*
Barium	Iron	Potassium	Zinc
Beryllium	Lead	Selenium	-

* If uranium concentration is ≥ 0.010 mg/l, additional analysis for uranium (total) is required. If the uranium (total) concentration is ≥ 0.030 , additional analysis for the Profile I-R is required.

(2) Profile I-R includes Profile I⁽¹⁾ in addition to the following parameters:

Parameter	Reference Value
Gross Alpha*	15 pCi/L
226Radium + 228Radium	5 pCi/L
Uranium	0.03 mg/L

*Report gross alpha and adjusted gross alpha in pCi/L.

Radiological analyses shall be performed on unfiltered samples for the total recoverable fraction. If the standard deviation (SD) of the gross alpha analysis is ≥ 15 pCi/L, the sample shall be re-analyzed for gross alpha using the co-precipitation method, EPA 00-02.

If Uranium is >0.03 mg/L in solution or is known or suspected to be $\geq 0.05\%$ in ore, the Permittee should contact the Nevada Department of Health and Human Services - Radiation Control Program to discuss characterization and associated Permitting or licensing requirements.

- (3) All sample analyses resulting in a pH value less than or equal to 5.0 SU shall also be analyzed for acidity (mg/L, as CaCO₃ equivalent).
 - (4) Water quality data may be obtained from the town of Silver Peak municipal water supply, if available.
- E. Quarterly and annual monitoring reports and release reporting shall be in accordance with Part II.B.
- F. All sampling and analytical accuracy shall be in accordance with Part II.E.
- G. Permit Limitations
1. Failure to meet a Schedule of Compliance date or requirement.
 2. Except as otherwise allowed by this Permit, a minimum 2-foot freeboard shall be maintained in all ponds.
 3. The facility shall not degrade waters of the State to the extent that applicable water quality standards or reference values, and background concentrations, are exceeded.
 4. The use of additional chemicals not disclosed in the approved application.

Exceedances of these limitations may be Permit violations and shall be reported as specified in Part II.B.4.

- H. The facility shall maintain automated or manual calibrated rain and snow gauge(s), which shall be monitored at least daily to record precipitation (inches of water, including snow water equivalent). A written and/or electronic record of precipitation data, shall be maintained on site and shall be submitted to the Division upon request, with each Permit renewal application, and pursuant to Parts II.B.1 and II.B.2, as applicable, in a Division-approved electronic format.
 - I. The Permittee shall inspect all control devices, systems, and facilities weekly, and during (when possible) and after major storm events. These inspections are performed to detect evidence of:
 - 1. Deterioration, malfunction, or improper operation of control or monitoring systems;
 - 2. Sudden changes in the data from any monitoring device;
 - 3. The presence of liquids in leak detection systems; and
 - 4. Severe erosion or other signs of deterioration in dikes, diversions, closure covers, or other containment devices.
 - J. Prior to initiating permanent closure activities at the facility, or at any process component or other source within the facility, the Permittee must have an approved final plan for permanent closure.
 - K. The Permittee shall remit an annual review and services fee in accordance with NAC 445A.232 starting July 1 after the effective date of this Permit and every year thereafter until the Permit is terminated or the facility has received final closure certification from the Division.
 - L. The Permittee shall not dispose of or treat Petroleum-Contaminated Soil (PCS) on the mine site without first obtaining from the Division approval of a PCS Management Plan.
 - M. When performing dust suppression activities, the Permittee shall use best management practices and appropriate selection of water source and additives to prevent degradation of waters of the State. If a dust suppressant exceeds a water quality standard and the corresponding natural background water concentration in the area where dust suppression will occur, the Permittee shall demonstrate no potential to degrade waters of the State.
 - N. Continuing Investigations: None Required
- II. General Facility Conditions and Limitations
- A. General Requirements
 - 1. The Permittee shall achieve compliance with the conditions, limitations, and requirements of the Permit upon commencement of each relevant activity. The Administrator may, upon the request of the Permittee and after public notice (if required), revise or modify a Schedule of Compliance in an issued Permit if he

or she determines good and valid cause (such as an act of God, a labor strike, materials shortage, or other event over which Permittee has little or no control) exists for such revision.

2. The Permittee shall at all times maintain in good working order and operate as efficiently as possible, all devices, facilities, and systems installed or used by the Permittee to achieve compliance with the terms and conditions of this Permit.
3. Whenever the Permittee becomes aware that he or she failed to submit any relevant facts in the Permit application, or submitted incorrect information in a Permit application or in any report to the Administrator, the Permittee shall promptly submit such facts or correct information. Any inaccuracies found in this information may be grounds for revocation or modification of this Permit and appropriate enforcement action.

B. Reporting Requirements

1. The Permittee shall submit quarterly reports, in a Division-approved electronic format, which are due to the Division on or before the 28th day of the month following the quarter and must contain the following:
 - a. Analytical results of the solution collected from monitoring locations identified in Parts I.D.2, I.D.3, and I.D.4, reported on NDEP Form 0190 or equivalent;
 - b. Monthly volume measurements identified in Part I.D.1;
 - c. Water and collar elevations for site monitoring wells identified in Parts I.D.2 and I.D.3;
 - d. Monitoring results from the piezometers identified in Part I.D.5, reported on NDEP Form 0590 or equivalent;
 - e. A record of releases, and the remedial actions taken in accordance with the approved Emergency Response Plan on NDEP Form 0490 or equivalent;

Facilities which have not initiated mining or construction, must submit a quarterly report identifying the status of mining or construction. Subsequent to any noncompliance or any facility expansion which provides increased capacity, the Division may require an accelerated monitoring frequency.

2. The Permittee shall submit an annual report, in a Division-approved electronic format, by February 28th of each year, for the preceding calendar year, which contains the following:
 - a. Analytical results of water quality samples collected from the municipal water supply identified in Part I.D.1, reported on NDEP Form 0190 or equivalent;
 - b. A synopsis of releases on NDEP Form 0390 or equivalent;
 - c. A brief summary of site operations, including the number of tons of ore milled or placed on heaps (as applicable) during the year, construction and

- expansion activities, and major problems with the fluid management system;
- d. A table of total monthly precipitation amounts, recorded in accordance with I.H, reported for either a five-year history previous to the date of submittal or the history since initial Permit issuance, whichever is shorter;
 - e. An updated version of the facility monitoring and sampling procedures and protocols, as applicable;
 - f. An updated evaluation of the closure plans, as applicable, using specific characterization data for each process component with respect to achieving stabilization; and
 - g. Graphs of flow rates, pH, sulfite, TOC, total dissolved solids (TDS), sulfate, chloride, nitrate + nitrite (as N), fluoride, zinc, and arsenic concentration (as applicable), versus time for all fluid sampling points. These graphs shall display either a five-year history previous to the date of submittal or the history since initial Permit issuance, whichever is shorter. Additional parameters may be required by the Division if deemed necessary.
3. Release Reporting Requirements: The following applies to facilities with an approved Emergency Response Plan. If a site does not have an approved Emergency Response Plan, then all releases must be reported as per NAC 445A.347 or NAC 445A.3473, as appropriate.
- a. A release of any quantity of hazardous substance, as defined at NAC 445A.3454, to surface water, or that threatens a vulnerable resource, as defined at NAC 445A.3459, must be reported to the Division, and any immediately downgradient existing operations, as soon as practicable after knowledge of the release, and after the Permittee notifies any emergency response agencies, if required, and initiates any action required to prevent or abate any imminent danger to the environment or the health or safety of persons. An oral report shall be made by telephone to (888) 331-6337, and a written report shall be provided within 10 days in accordance with Part II.B.4.b.
 - b. A release of a hazardous substance in a quantity equal to or greater than that which is required to be reported to the National Response Center pursuant to 40 Code of Federal Regulations (CFR) Part 302 must be reported as required by NAC 445A.3473 and Part II.B.3.a.
 - c. A release of a non-petroleum hazardous substance not subject to Parts II.B.3.a. or II.B.3.b., released to soil or other surfaces of land, and the total quantity is equal to or exceeds 500 gallons or 4,000 pounds, or that is discovered in or on groundwater in any quantity, shall be reported to the Division, and any immediately downgradient existing operations, no later than 5:00 P.M. of the first working day after knowledge of the release. An oral report shall be made by telephone to (888) 331-6337 for in-State callers or (775) 687-9485 for out-of-State callers, and a written report shall be

provided within 10 days in accordance with Part II.B.4.b. Smaller releases, with total quantity greater than 25 gallons or 200 pounds and less than 500 gallons or 4,000 pounds, released to soil or other surfaces of land, or discovered in at least 3 cubic yards of soil, shall be reported quarterly on NDEP Form 0390 or equivalent.

- d. Petroleum Products and Coolants: If a release is subject to Parts II.B.3.a. or II.B.3.b., report as specified in Part II.B.3.a. Otherwise, if a release of any quantity is discovered on or in groundwater, or if the total quantity is equal to or greater than 100 gallons released to soil or other surfaces of land, report as specified in Part II.B.3.c. Smaller releases, with total quantity greater than 25 gallons but less than 100 gallons, released to soil or other surfaces of land, or if discovered in at least 3 cubic yards of soil, shall be reported quarterly on NDEP Form 0390 or equivalent.
4. The Permittee shall report to the Administrator any noncompliance with the Permit.
 - a. Each such event shall be reported orally by telephone to (775) 687-9400, not later than 5:00 P.M. of the next regular work day from the time the Permittee has knowledge of the circumstances. This report shall include the following:
 - i. Name, address, and telephone number of the owner or operator;
 - ii. Name, address, and telephone number of the facility;
 - iii. Date, time, and type of incident, condition, or circumstance;
 - iv. If reportable hazardous substances were released, identify material and report total gallons and quantity of contaminant;
 - v. Human and animal mortality or injury;
 - vi. An assessment of actual or potential hazard to human health and the environment outside the facility; and
 - vii. If applicable, the estimated quantity of material that will be disposed and the disposal location.
 - b. A written summary shall be provided within 10 days of the time the Permittee makes the oral report. The written summary shall contain:
 - i. A description of the incident and its cause;
 - ii. The periods of the incident (including exact dates and times);
 - iii. If reportable hazardous substances were released, the steps taken and planned to complete, as soon as reasonably practicable, an assessment of the extent and magnitude of the contamination pursuant to NAC 445A.2269;
 - iv. Whether the cause and its consequences have been corrected, and if not, the anticipated time each is expected to continue; and

- v. The steps taken or planned to reduce, eliminate, and prevent recurrence of the event.
- c. The Permittee shall take all available and reasonable actions, including more frequent and enhanced monitoring to:
 - i. Determine the effect and extent of each incident;
 - ii. Minimize any potential impact to the waters of the State arising from each incident;
 - iii. Minimize the effect of each incident upon domestic animals and all wildlife; and
 - iv. Minimize the endangerment of the public health and safety which arises from each incident.
- d. If required by the Division, the Permittee shall submit, as soon as reasonably practicable, a final written report summarizing any related actions, assessments, or evaluations not included in the report required in Part II.B.4.b., and including any other information necessary to determine and minimize the potential for degradation of waters of the State and the impact to human health and the environment. Submittal of the final report does not relieve the Permittee from any additional actions, assessments, or evaluations that may be required by the Division.

C. Administrative Requirements

- 1. A valid Permit must be maintained until permanent closure and post-closure monitoring are complete. Therefore, unless permanent closure and post-closure monitoring have been completed and termination of the Permit has been approved in writing by the Division, the Permittee shall apply for Permit renewal not later than 120 days before the Permit expires.
- 2. Except as required by NAC 445A.419 for a Permit transfer, the Permittee shall submit current Permit contact information described in paragraphs (a) through (c) of subsection 2 of NAC 445A.394 within 30 days after any change in previously submitted information.
- 3. All reports and other information requested by the Administrator shall be signed and certified as required by NAC 445A.231.
- 4. All reports required by this Permit, including, but not limited to, monitoring reports, corrective action reports, and as-built reports, as applicable, and all applications for Permit modifications and renewals, shall be submitted in both hard copy and a Division-approved electronic format.
- 5. The Permittee shall submit any new or updated Universal Transverse Mercator (UTM) location data for all monitoring points specified in Part I.D, expressed in meters and decimals of a meter, using the Nevada Coordinate System of 1983 (also known as the North American Datum of 1983 or NAD83, ref NRS 327.005), with each Permit renewal, as-built report, and monitoring plan

update, as applicable. Data shall be submitted electronically to the Division in Excel format.

6. When ordered consistent with Nevada Statutes, the Permittee shall furnish any relevant information in order to determine whether cause exists for modifying, revoking and reissuing, or permanently revoking this Permit, or to determine compliance with this Permit.
7. The Permittee shall maintain a copy of, and all modifications to, the current Permit at the permitted facilities at all times.
8. The Permittee is required to retain during operation, closure, and post-closure monitoring, all records of monitoring activities and analytical results, including all original strip chart or data logger recordings for continuous monitoring instrumentation, and all calibration and maintenance records. This period of retention must be extended during the course of any unresolved litigation.
9. The provisions of this Permit are severable. If any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not thereby be affected.
10. The Permittee is authorized to manage fluids and solid wastes in accordance with the conditions of this Permit. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of Federal, State, or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under the Water Pollution Control Statutes for releases or discharges from facilities or units not regulated by this Permit. NRS 445A.675 provides that any person who violates a Permit condition is subject to administrative or judicial action provided in NRS 445A.690 through 445A.705.

D. Division Authority

The Permittee shall allow authorized representatives of the Division, at reasonable times, and upon the presentation of credentials to:

1. Enter the premises of the Permittee where a regulated activity is conducted or where records are kept per the conditions of this Permit;
2. Have access to and copy any record that must be kept per the conditions of this Permit;
3. Inspect and photograph any facilities, equipment (including monitoring and control equipment), practices, or operations regulated by this Permit; and
4. Sample or monitor for any substance or parameter at any location for the purposes of assuring Permit and regulatory compliance.

E. Sampling and Analysis Requirements

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. For each measurement or sample taken pursuant to the conditions of this Permit, the Permittee shall record the following information:
 - a. The exact place, date, and time of the inspection, observation, measurement, or sampling, and
 - b. The person(s) who inspected, observed, measured, or sampled.
3. Samples must be taken, preserved, and labeled according to Division approved methods.
4. Standard environmental monitoring chain of custody procedures must be followed.
5. Samples shall be analyzed by a laboratory certified or approved by the State of Nevada, as applicable for the method(s) being performed. The Permittee must identify in all required reports the certified and approved laboratories used to perform the analyses, laboratory reference numbers, and sample dates, and for the electronic version of each report only, include all associated laboratory analytical reports, including test results, test methods, chain-of-custody forms, and quality assurance/quality control documentation.
6. The accuracy of analytical results, unless otherwise specified, shall be expressed in mg/L and be reliable to at least two significant digits. The analytical methods used must have a practical quantitation limit (PQL) equal to or less than one-half the reference value for Profile I parameters. Laboratories shall report the lowest reasonable PQL based on in-house method detection limit studies. Samples for Profile I parameters shall be filtered, digested, and analyzed for the dissolved fraction, unless otherwise required by the Division. Unless otherwise approved by the Division, analytical results that are less than the PQL shall be reported quantitatively by listing the PQL value preceded by the "<" symbol.

F. Permit Modification Requirements

1. Any material modification, as defined at NAC 445A.365, plan to construct a new process component, or proposed change to Permit requirements must be reported to the Division by submittal of an application for a Permit modification, or if such changes are in conformance with the existing Permit, by submittal of a written notice of the changes. The Permit modification application must comply with NAC 445A.391 through 445A.399, 445A.410, 445A.414, 445A.4155, 445A.416, 445A.417, 445A.440, and 445A.442, as applicable. The construction or modification shall not commence, nor shall a change to the Permit be effective, until written Division approval is obtained.
2. Prior to the commencement of mining activities at any site within the State which is owned or operated by the Permittee but not identified and

characterized in a previously submitted application or report, the Permittee shall submit to the Division a report which identifies the locations of the proposed mine areas and waste disposal sites, and characterizes the potential of mined materials and areas to release pollutants. Prior to development of these areas the Division shall determine if any of these new sources will be classified as process components and require engineered containment as well as Permit modification.

3. The Permittee shall notify the Division in writing at least 30 days before the introduction of process solution into a new process component or into an existing process component that has been materially modified, or of the intent to commence active operation of that process component. Before introducing process solution or commencing active operation, the Permittee shall obtain written authorization from the Division.
4. The Permittee must obtain a written determination from the Administrator of any planned process component construction or material modification, or any proposed change to Permit requirements, as to whether it is considered a Permit modification, and if so, what type.
5. The Permittee must give advance notice to the Administrator of any planned changes or activities which are not material modifications in the permitted facility that may result in noncompliance with Permit requirements.

Prepared by: Michelle Griffin
Date: 14 February 2022
Revision 00: 2022 New Permit